Ommen N, Blut M, Backhaus C, Woisetschläger DM.

[Toward a better understanding of stakeholder participation in the service innovation process: More than one path to success.](#)

Journal of Business Research 2016, 69(7), 2409-2416.

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DOI link to article:

<http://dx.doi.org/10.1016/j.jbusres.2016.01.010>

Date deposited:

09/03/2016

Embargo release date:

24 August 2017

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Toward a better understanding of stakeholder participation in the service innovation process: More than one path to success

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Submission: October 2014

Revision: June 2015

Second Revision: November 2015

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Paper submitted to the *Journal of Business Research* – GMC 2014 Special Issue on Service Innovation, Renewal, and Adoption/Rejection Research

Abstract

Acknowledging the positive effects of stakeholder participation in new service development projects, the present research examines factors contributing to well-designed stakeholder participation processes. Data come from 220 franchisees engaged in innovation projects. Fuzzy set qualitative comparative analysis (fsQCA) assesses the interplay of six participation quality dimensions: (1) task-related resources; (2) early involvement; (3) degree of influence; (4) transparency of processes; (5) incentive mechanisms; and (6) voluntariness of participation. Results show that successful stakeholder participation is characterized by a complex interplay of these participation quality dimensions. While some firms are excellent in all six dimensions, other firms successfully integrate stakeholders by focusing on selected participation quality dimensions. Uncovering these complex interrelationships helps managers to better design participatory processes in new service development projects.

Keywords: Innovation management, stakeholder participation, participation quality, innovation performance, acceptance of innovation, fuzzy set qualitative comparative analysis

1. Introduction

New service development (NSD) continues to receive increasing attention from marketing practitioners and academics (Ettlie & Rosenthal, 2011). In particular, comparing new service development to new product development (NPD), prior studies emphasize the benefits of integrating stakeholders (i.e., customers, employees, and suppliers) into the innovation process (e.g., Vargo & Lusch, 2004). Presumably, stakeholder involvement contributes to a project's success by generating new ideas and provides knowledge resources to increase in-depth expertise of market needs. While outcomes of stakeholder participation are relatively well understood, the factors characterizing successful participatory innovation processes receive less attention.

Logically, quality and design differences in participatory innovation processes motivate stakeholders differently and result in varying contributions to innovation projects. According to Amabile's (1983) Componential Theory of Creativity, the new product development work environment influences a team's displayed creativity level. Companies can increase an individual's motivation, for instance, by granting decision making autonomy to the individual or by providing feedback about outcomes of the performed job (Amabile & Kramer, 2011). Hence, managers who are responsible for designing and managing innovation projects must be knowledgeable about how to design new service development for participating stakeholders. Surprisingly, prior research in the stakeholder integration literature continues to focus either on conceptual work or selected stakeholder participation characteristics. For example, Wei, Frankwick, and Nguyen (2012) investigate whether or not increasing employee participation in reward decisions increases new product performance.

Examining single design factors to better understand how to integrate stakeholders does not fully explain what determines a well-designed innovation project from the stakeholders' perspective. Stakeholders may expect the firm to have well-designed processes

in place, and they may expect to receive monetary compensation for their contributions. Alternatively, stakeholders only may expect monetary incentives if innovation projects are poorly designed (e.g., regarding the amount of resources offered). Similarly, Amabile and Kramer (2011) note the importance of examining joint effects of different design characteristics used to motivate individuals. According to the suggested progress principle, the key to improving an individual's motivation is to cause that person to make progress in meaningful work. The more often individuals experience such progress, the more likely they are to remain creatively productive. Clear and meaningful goals, sufficient resources, and helpful colleagues boost one's motivation to do a good job (Amabile & Kramer, 2011). Hence, the progress principle suggests that the motivating elements of a social environment are interdependent.

Against this background, the present study makes two major contributions. First, this study examines the factors that define well-designed innovation projects from the stakeholder's perspective. Assuming that stakeholders can best assess whether or not an innovation project is designed to stimulate participation, a good design leads to greater participant effort. Second, the study's results help to clarify the relationships between the participatory characteristics of innovation projects. Although innovation projects might be expected to be excellent in all aspects, study results show that some aspects are more important than others. Further, interrelationships between those aspects are more complex than initially assumed.

This paper next reviews prior research on design characteristics of participatory innovation processes, and outlines the current state of knowledge in this area. A conceptualization of stakeholder participation derives two hypotheses regarding innovation project design and the relationship among project characteristics. Data from 220 franchisees test the hypotheses. Using fuzzy set qualitative comparative analysis (fsQCA), the study

explores causal combinations of participatory design characteristics that lead to superior innovation success. Finally, the article concludes with a discussion of the findings and managerial implications.

2. Conceptual development

Co-creation, collaboration, interaction, involvement, or simply participation generally refer to the integration of stakeholders into innovation processes, and share the common view that such an approach should generally associate with positive outcomes (Alam, 2002; Alam & Perry, 2002; Ordanini & Parasuraman, 2010).

Regarding the *actors who participate*, the literature on service innovation differentiates between three main stakeholder groups: customers, employees, and external stakeholders such as suppliers, channel partners, or other third-party institutions. Ordanini and Parasuraman (2010) investigate the comparative effects of customer, contact employee, and external business partner collaboration in the luxury hotel industry. Their study shows that innovation volume benefits from collaborating with customers and contact employees, while collaborating with business partners and contact employees positively affects innovation radicalness.

The literature provides limited direct suggestions for ways *how to design* participatory service innovation processes. Describing consumer co-creation in new product development, Hoyer, Chandy, Dorotic, Krafft, and Singh (2010) propose a set of firm-level variables that positively impact the propensity to engage in a participative innovation process. They argue that the two generic options of increasing the perceived benefits or reducing the costs (e.g., providing toolkits) may be effective in stimulating consumer co-creation. Empirically, Im and Nakata (2008) investigate the role of four environmental project characteristics as antecedents to cross-functional integration. They conclude that all four aspects—a market-

oriented rewards system, planning process formalization, managerial encouragement to take risks, and managerial involvement in a new product project—positively impacting cross-functional integration and enhancing new product advantage. Given the paucity of work directly related to design characteristics of stakeholder participation, this study's conceptual foundation roots in three adjacent literature streams, namely, open innovation, creativity, and design of work environments that promote innovation.

2.1. Insights from open innovation literature

Integrating stakeholders with their ideas and resources is at the heart of open innovation and improves innovation capabilities. The innovation contests and crowdsourcing literatures suggest that several design characteristics stimulate stakeholder participation (e.g., Adamczyk, Bullinger, & Möslin, 2012; Brabham, 2008; Ebner, Leimeister, & Krcmar, 2009). Lakhani and Panetta (2007) study organizational design characteristics of three open source software communities. They conclude that designing tasks in a modular and granular way enhance participation. Furthermore, self-selection of tasks, availability of tools to support innovative behavior and transparency are key characteristics of participative organizational design principles (Lakhani & Panetta, 2007). Analyzing 283 crowdsourcing contests, Zheng, Li, and Hou (2011) investigate the roles of autonomy, variety, tacitness, analyzability, and variability as design features impacting intrinsic motivation. They suggest these variables determine participation intention and actual participation. Reviewing the literature on innovation contests, Adamczyk et al. (2012) propose a framework of 15 design elements for characterizing innovation projects. While a majority of these elements are operational, and/or specifically apply to participation in innovation contests (e.g., contest period, submission evaluation process), the elements of task/topic specificity, incentives, pre-definition of a target group, and functionalities for supporting interaction among participants seem relevant for examining stakeholder participation in innovation processes.

2.2. *Insights from the creativity literature*

How can organizations foster and capitalize on the creative potential of employees? This question has drawn a substantial amount of attention (see Anderson, Potočnik, & Zhou, 2014). Studying design characteristics of how work environments affect employee creativity has led to the development of three scales. First and most prominent, the KEYS scale suggests to stimulate creativity that managers should (1) encourage creativity at both the supervisory and the organizational levels, (2) grant decision-making autonomy, (3) provide sufficient resources, (4) set challenging tasks, and (5) ensure a supportive work group environment (Amabile, Conti, Coon, Lazenby, & Herron, 1996). Pressures from excessive workload and organizational impediments such as internal strife, conservatism, and rigid formal management structures negatively influence creativity (Amabile et al., 1996). As a second approach, the Team Climate Inventory (TCI) suggests (1) participative safety, (2) support for innovation, (3) challenging objectives, (4) task orientation, and (5) interaction frequency are important antecedents of a work group's innovative climate (Anderson & West, 1998). Third, the Creative Climate Questionnaire (CCQ) covers 10 dimensions, including challenge, freedom, idea support, trust, debates, and idea time (Ekvall, 1996). Hunter, Bedell, and Mumford's (2007) meta-analytic review summarizes climate dimensions' role in creativity and innovation following a taxonomy of 14 climate dimensions. While findings show creativity and innovation most prominently relate to working climates of positive interpersonal exchange, other areas including intellectual stimulation, challenge, top-management support, availability of resources, and reward orientation play an important role as well.

The literature offers little about potential interrelationships among the factors characterizing “good” stakeholder participation. Hoyer et al. (2010, p. 290) argue that stakeholders “are probably motivated by a combination of these factors and therefore, a

multi-pronged approach that targets several motivators [...] would likely be most effective.” Similarly, Lakhani and Panetta (2007) conclude that focusing optimizations of a particular design facet may lead to negative results.

With this background, the present study conceptualizes participatory processes as complex interplay of different design characteristics. This summative evaluation of design characteristics refers to participation quality. Analogous to corresponding approaches defining the quality construct, participation quality is “a global judgment, or attitude, relating to the superiority” of the participation process (Parasuraman, Zeithaml, & Berry 1985, p. 16).

3. Testing the interrelationship among dimensions of participation quality

3.1. Conceptualizations of participation quality and development of measurement

To assess which factors contribute to successful stakeholder participation in innovation projects and to analyze their interrelationships, this study uses novel measures because prior research does not provide comprehensive sets of scales. The scale development process includes three stages (Churchill, 1979). First, this study combines literature from the creativity and innovation management fields, and also draws on literature outside the field (i.e., political science) to identify a large number of factors that potentially impact participation quality. Second, in-depth interviews with innovation managers identify factors relevant for integrating stakeholders. Third, this research refines the measure in a quantitative study. To complement the identified dimensions, the study utilizes qualitative in-depth interviews with 24 managers from 18 franchise systems in order to extract further factors important when integrating franchisees into innovation management. From the literature review and in-depth interviews, the study develops items for the identified dimensions, and condenses them using survey data from 220 franchisees. Exploratory and confirmatory factor analyses confirm six factors contribute to quality perceptions of the innovation process. In

particular, the measure includes the following design characteristics: (1) task-related resources—referring to the existence of necessary resources such as personnel, time, material, information, and financial support during the innovation process; (2) early involvement—relating to the stage at which participants are integrated into the project; (3) degree of influence—characterizing the extent to which participants affect the development of innovations, ranging from no possible influence to the extreme of complete control; (4) transparency of processes—describing the degree of transparency experienced by participants; (5) incentive mechanisms—indicating that specific incentive mechanisms might be in place in order to stimulate participant cooperation; and (6) voluntariness of participation—differentiating between free and creative thinking versus participating under coercion or pressure. Participation motivation refers to the situational level of motivation and measured by three items from Cadwallader, Jarvis, Bitner, and Ostrom (2010). Innovation performance refers to the product's perceived newness. This study uses Wang and Ahmed's (2004) four-item scale to measure innovation performance. Acceptance of innovation refers to an individual's positive view regarding the innovation, and the belief that the innovation will result in favorable outcomes for the organization (Choi & Price, 2005). The acceptance of innovation measure is based on the scale provided by Wang and Ahmed (2004).

Qualitative interviews results failed to show one individual knockout criterion that must be present for successful innovation projects. Measurement items for participation quality come from a literature review on public policy (Abelson & Gauvin, 2006; Rowe & Frewer, 2004, 2005). All latent constructs were measured using multi-item 5-point Likert scales (from 1 =strongly disagree to 5 =strongly agree, see Appendix).

3.2. Performance consequences of participation quality and criticality of specific dimensions

The existing literature identifies several positive outcomes of participation for firms. Mustak, Jaakola, and Halinen (2013) categorize these positive effects into three groups:

relational benefits, performance improvements, and enhanced innovativeness. The componential theory of creativity serves as the foundation theory for how participation quality affects an individual's motivation and creativity (Amabile 1983). According to Amabile, the external social environment shows a major influence on an individual's level of creativity beyond intra-individual factors. Other scholars provide empirical support for the componential theory of creativity demonstrating how the social environment affects innovativeness (e.g., Birdi, Leach, & Magadley, 2014).

In addition to these literature insights, the qualitative interviews suggest that participants perceive the work environment to be motivating when franchisees have significant influence during an innovation project, incentive mechanisms are in place, and sufficient task-related resources are offered. Also, early integration in the project, transparent processes, and voluntary participation are important aspects. Some of these factors relate to the social environment (see Amabile et al., 1996, 2011). The authors argue that actions supporting work and contributing to an individual's motivation include setting clear goals, providing autonomy, offering sufficient resources and time, helping with the work, and enabling the learning that results from problems and successes. In the long run, these actions associate with higher employee motivation and increase creativity.

The literature proposes that an individual's innovative work behavior relates not only to the generation of novel and useful ideas (i.e., creativity), but also to implementation (Birdi et al., 2014). Hence, this study assumes that the project's characteristics positively affect innovation acceptance (see Figure 1). In franchise systems, innovation acceptance among franchisees is particularly germane. Franchise systems allow franchisees a certain degree of independence from the headquarters (Blut et al., 2011). In particular, franchisees can neither be forced to participate in innovation projects, nor can they be easily forced to accept outcomes of these projects. Consequently, participation quality is both critical to obtain local

market knowledge from the network partners and a prerequisite for obtaining customer-oriented successful innovations. Accepting an innovation project's results and motivating participation in innovation projects are important consequences of participation quality.

H1: The dimensions of participation quality positively relate to (a) motivation to participate in an innovation project, (b) innovation performance, and (c) acceptance of innovations.

The existing literature predominantly suggests that each participation quality dimension leads to the three proposed outcomes stated above. Recent studies applying qualitative comparative analysis (QCA) propose that beneficial outcomes may regularly be the result of particular combinations of input dimensions (e.g., Cheng, Chang, & Li, 2013). Amabile and Kramer (2011) provide additional evidence for this assumption. They argue supporting conditions such as clear and meaningful goals, sufficient resources, and helpful colleagues motivate individuals to do a better job than when they receive fewer supportive elements. Amabile and Kramer's (2010, 2011) progress principle proposes that initial progress reinforces the motivation to continue, which in turn leads to more progress. Similarly, initial innovation success may motivate the individual to make further use of other supporting elements, reinforcing the motivational effects of environmental elements. Prior studies show reinforcing effects between extrinsic rewards and creativity training (Burroughs, Dahl, Moreau, Chattopadhyay, & Gorn, 2011). Rather than assume the social environment's independent effects on motivation, this research argues that all (or at least several) aspects together reinforce each other, leading to greater motivation than the individual elements alone. Against this background, H2 assumes that several combinations of participation quality dimensions exist, and they lead to superior motivation to participate, greater innovation performance, and higher acceptance of innovations.

H2: Alternative combinations of participation quality dimensions positively relate to:

- (a) motivation to participate in an innovation project, (b) innovation performance, and (c) acceptance of innovations.

Figure 1 summarizes the conceptual model and hypotheses.

Figure 1 here

4. Method and results

For the present study, franchisors were asked to participate in exchange for a customized analysis of their participatory innovation processes. Top management from 13 franchise systems responded favorably to this request. Next, 864 franchise partners from these 13 systems were contacted and asked to complete a written questionnaire. The 13 franchise systems operate in the retailing (7), craft services (3), or other services (3) sectors. A total of 220 usable questionnaires were returned, resulting in a 26.6% response rate. Respondents evaluated the six dimensions of participation quality, characterizing innovation projects within their particular franchise systems. In addition, they rated their motivation to participate in innovation projects and their acceptance of innovations. Finally, participants evaluated innovation performance of their franchise system. Scales and measurement properties are reported in Appendix A.

4.1. Fuzzy set qualitative comparative analysis

4.1.1. Formation of fuzzy sets

To assess the joint effects of the six participation quality dimensions on performance outcomes, this study uses fuzzy set qualitative comparative analysis (fsQCA) for the analysis. This method's particular strength is detecting complex combinations of criteria leading to

performance outcomes. Fuzzy set analysis identifies combinations of design characteristics for participatory innovation projects that lead to superior innovation performance. Before applying the method, the existing data is calibrated and transformed into fuzzy sets within the range between 0 and 1 (Ragin, 2008a). The limits of 0 and 1 represent ideal group membership values, which denote complete non-membership of a group or full membership respectively. In this study, both the design characteristics—or causal conditions—such as task-related resources, early involvement, and degree of influence, as well as outcomes such as innovation performance, represent fuzzy set values based on the survey's 5-point Likert scales (Ragin, 2009). Because calibrating fuzzy set values can be done in different ways, transparent documentation is essential. For this study, the scale's anchor values are set around the mean value of the respective constructs to account for distribution skewness.

Accordingly, values close to the mean represent the crossover point with a fuzzy score of 0.5. Values below the 5th percentile describe full non-membership (fuzzy score = 0), and values above the 95th percentile describe full membership (fuzzy score = 1). In addition, values for the fuzzy scores of 0.25 and 0.75 represent “less in” and “more in” membership, respectively.

4.1.2. Constructing the truth table

To develop the truth tables necessary for the analysis, this research draws on an algorithm with the following steps (Ragin, 2008b): (1) creating a truth table for ideal types, (2) reducing cases of limited empirical diversity, (3) identifying consistently sufficient conditions, (4) recreating the truth table, and (5) logically minimizing the truth table. The resulting consistency and coverage values measure the overall solution. In a first step, crisp sets with 2^k (k =number of analyzed constructs) lines are created (Ragin, 2009). In the present case with six potential influencing factors, the software creates all 64 logically possible combinations of existing fulfilled or unfulfilled conditions in a raw data matrix. In the second step, the algorithm deletes all rows containing combinations without any empirical cases

(Ragin, 2009). Next, the remaining combinations are examined for consistency. The respective consistency value shows the degree to which set membership is a subset of outcome membership. For the consistency threshold, Ragin (2008b) recommends values at least above 0.75, and preferably above 0.8. Accordingly, all rows that include cases having a consistency value lower than 0.8 were excluded. Next, the inherent combinations of sufficient conditions were minimized using the Quine-McCluskey algorithm (Ragin, 2008b).

4.1.3. Results of the fsQCA

Table 1 shows the solutions generated by the fsQCA software not only provide the presentation of each combination (paths) leading to the outcome, but also present consistency and coverage values for both the individual path and total solutions. Coverage measures how much each solution term and overall solution explains the outcome. This measure is similar to magnitude effects (R^2) in regression analyses (Ragin, 2009). While raw coverage measures the membership's proportion in the outcome explained by each term, unique coverage measures the membership's proportion in the outcome explained solely by each individual term, excluding memberships covered by other solution terms.

Table 1 here

Table 1 summarizes the intermediate solutions for the three outcomes of innovation success, acceptance of the innovation, and intrinsic motivation to participate in innovation projects (Cheng et al., 2013; Ragin, 2008a). Accordingly, the logical statement of the second path for the outcome of innovation success is $\sim\text{res} * \sim\text{ear} * \sim\text{inf} * \sim\text{tra} * \text{inc} * \sim\text{vol}$, where the asterisks “*” represent the logical operator AND, and the tilde “~” connotes the negation of the condition. For instance, the term “inc” in paths 1 and 2 means that firms on this path provide incentives to participants of the innovation project ($\sim\text{inc}$ alternatively means no incentives).

Table 1 also shows coverage and consistency indices for each path and the solution as a whole. The consistency measure shows how often the solution path and the total solution are included in the subset of outcomes (Ragin, 2008b). Consistency reflects the frequency with which the solutions are regarded as a sufficient condition for the outcome. This measure serves as an analogy for significance metrics in statistical hypothesis testing (Woodside & Zhang, 2011). Results show that two alternative paths lead to innovation success. Thereby, the total solution is consistent to 91% (99% for acceptance of the innovation and 94% for intrinsic motivation). The internal consistency scores of individual solution path are above 0.88, thus exceeding the threshold value of 0.8 used when creating the truth tables. These high scores indicate that the solution paths are sufficient conditions for the analyzed outcomes (Ragin, 2009). Table 1 shows several consistent paths to the analyzed outcomes. These solution paths are sufficient conditions leading to innovation success, acceptance of innovation, and intrinsic motivation.

Of the two identified paths leading to perceived innovation success, the second path attracts attention because all causal conditions except incentives are negated ($\sim\text{res}^*\sim\text{ear}^*\sim\text{inf}^*\sim\text{tra}^*\text{inc}^*\sim\text{vol}$). Companies fitting this causal recipe achieve innovation success only when the design condition of incentives is present. On the contrary, four companies reach the goal of perceived innovation success by fulfilling all six design characteristics of participation—the presence of task-related resources, early involvement, high degree of influence, transparency of processes, incentive mechanisms, and voluntariness (path 1, $\text{res}^*\text{ear}^*\text{inf}^*\text{tra}^*\text{inc}^*\text{vol}$).

Results identify four paths to achieve acceptance of participatory developed innovations. These paths imply a high degree of influence. Comparing the solution paths 3 ($\text{res}^*\sim\text{ear}^*\text{inf}^*\sim\text{tra}^*\text{inc}^*\sim\text{vol}$), 4 ($\sim\text{res}^*\text{ear}^*\text{inf}^*\sim\text{tra}^*\sim\text{inc}^*\text{vol}$), and 5 ($\text{res}^*\text{ear}^*\text{inf}^*\text{tra}^*\sim\text{inc}^*\sim\text{vol}$) reveals that the absence of task-related resources and incentives

can be compensated for by the presence of (a) early involvement and voluntariness and/or (b) task-related resources, earliness of involvement, and transparency of processes. A high degree of influence is present in all three solution paths. The first solution path includes all six conditions (res*ear*inf*tra*inc*vol), and shows the most unique coverage (23%).

Similarly, four solution paths explain the intrinsic motivation to participate in innovation projects. Like innovation acceptance, all solution paths leading to intrinsic motivation show the presence of a high degree of influence for paths 3 to 5 (systems on path 3: res*~ear*inf*~tra*inc*~vol; systems on path 4: ~res*ear*inf*~tra*~inc*vol; systems on path 5: res*ear*inf*tra*~inc*~vol). Again, the presence of task-related resources and incentive mechanisms can also be exchanged with (a) earliness of involvement and voluntariness; and/or (b) task-related resources, earliness of involvement, and transparency of processes. The first solution path (res*ear*inf*tra*inc*vol) has 15% unique coverage and impacts intrinsic motivation the most. All six hypothesized causal conditions are present for this path.

The fsQCA explored several combinations (paths) of participation quality dimensions that lead to superior innovation success, acceptance of innovation, and motivation among participants. Across all performance indicators, the results show that all six project characteristics impact at least one performance indicator, supporting H1a–c. In addition, the findings reveal that combinations, rather than single characteristics, impact performance measures, supporting H2a–c.

4.2. Validating results with a second testing approach

Testing H1a–c, a correlation analysis between the six characteristics and the outcome variables reveals that each antecedent shows a significant effect with at least one outcome variable ($p < 0.05$). To test H2a–c, t-tests examine whether systems following one of the

identified paths differ in terms of performance indicators from systems not following these paths. More specifically, the analysis contrasts two paths for innovation success, four paths for acceptance of innovation, and four paths for motivation. Results in Table 2 indicate that systems on path 1 display significantly higher innovation success than the remaining systems ($MD = -0.7, p < 0.01$). Systems on path 2 do not show higher innovation success ($MD = -0.1, p > 0.05$). With respect to acceptance of innovation, a central finding is that all paths (1, 3-5) outperform systems that do not follow one of the paths (systems on path 1: $MD = -0.6, p < 0.01$; systems on path 3: $MD = -0.5, p < 0.01$; systems on path 4: $MD = -0.2, p < 0.01$; and systems on path 5: $MD = -0.9, p < 0.01$). For franchisee motivation, results show that three of four paths lead to higher motivation. More precisely, systems on path 1 ($MD = -0.4, p < 0.01$), path 3 ($MD = -0.3, p < 0.01$), and path 5 ($MD = -0.5, p < 0.01$) show higher levels of franchisee motivation, whereas systems on path 4 are not significantly different ($MD = 0.1, p > 0.05$). In total, eight of the ten path comparisons in Table 2 are significant; hence, these findings support H2a–c.

Table 2 here

5. Discussion

5.1. Interpretation of findings

Table 1 shows five distinct paths toward a successful integration of franchisees in innovation projects. The most promising way to reach perceived innovation success, acceptance of innovation, and intrinsic motivation to participate altogether is combining favorable levels of task-related resources, early involvement, degree of influence, transparency of processes, incentive mechanisms, and voluntariness of participation (path 1). This path represents the largest group of the analyzed cases, but alternative paths exist. As

alternative paths occur in some cases, the evidence confirms more than one possible solution exists. Not all participation quality dimensions need to be implemented simultaneously.

The second path leading to perceived innovation success requires only incentives. Examining the qualitative data associating with path 2 reveals reasons why this path also leads to perceived innovation success. For firms matching path 2, the business model primarily relies on sales and distribution. Incentive mechanisms serve as the one and only condition for the innovation success. Accordingly, an interviewee familiar with his company's innovation projects explains:

“[...] innovations regarding marketing and sales are mainly driven by us [the franchisor]. [...] the respective concepts provided by the franchisor have short-term character, such as sales promotions, or how to acquire particular customer groups....”

Paths 3 to 5 do not relate directly to perceived innovation success. Instead, these paths highlight additional combinations of the participation quality dimensions that lead to favorable innovation acceptance and intrinsic motivation outcomes. Companies associating with path 3 show endowment of task-related resources—the possibility to influence decisions and to incentivize participants. The qualitative data suggest that participants in innovation projects receive incentives (cf. the previously considered path) exist in the form of “glory and honor.” The lack of early involvement and transparency are further explained by franchisors who emphasize the risk of spreading poorly conceived ideas too early, without sufficiently testing them before converting innovations into market-ready concepts. A company associating with path 3 draws on comparatively complex technical processes as the core business model. Not surprisingly, the successful path 3 development for innovation is less transparent and does not integrate participants at an early stage in some parts of the innovation process. Regarding the lack of voluntariness, the interviewee states that after a

few years of assistance from the systems' headquarters, the expectation arises that franchisees will leave their comfort zones and bring in own ideas in order to improve the business model:

"If you have reached the [...] economic comfort zone [...] then you have the opportunity to turn that time around and this is what we expect from you that you make your thoughts, ideas, how can you evolve it? Yes. From your professional perspective, experience background, etc. And then we have no longer a one way street, it'll work on both sides."

Companies associating with path 4 draw on earliness of integration, the possibility of influencing decisions and voluntariness, while task-related resources, transparency and incentive mechanism are not present. Here, the lack of transparency and incentives relates to reasons similar to those in the previous case. Lack of available task-related resources restricts the realization of promising ideas, as one of the interviewees explains:

"We cannot even realize half [of the ideas] of what we generate. This process is characterized by significant resource constraints."

Finally, path 5 is successful in terms of innovation acceptance and intrinsic motivation, thereby combining the presence of task-related resources, early involvement, degree of influence, and transparency of processes. Here again, a lack of incentives and voluntariness exists.

5.2. Managerial implications

Implications for managing participatory innovation projects in service networks are twofold. First, the results imply that favorable outcomes result from several combinations of the respective participation quality dimensions. Several subsets of causal conditions result in desirable outcomes. These results suggest that the choice of strategy depends on the prioritization of outcomes, the firm and industry context, and other factors. For instance, firms focusing on all three outcomes should attempt to perform well on all dimensions of participation quality. For firms attempting solely to improve their innovation performance, a

focus on incentives might suffice. Firms seeking to improve attitudes and motivations of their partners could follow one of four path alternatives (1, 3–5).

Second, the analysis suggests several measures to improve each dimension of participation quality. Regarding task-related resources, companies should provide innovation projects with the required resources such as time, budget, or expertise. Early involvement implies involving stakeholders in the innovation process's early stages. Franchisors should regularly inform franchisees about innovation-related initiatives. Also, they should extend an invitation to engage in ideation. In this context, the voluntary character of a potential franchisee engagement is important to emphasize. Regarding degree of influence, participants expect an opportunity to provide significant contributions to projects. Ideally, franchisors grant participants a high level of decision making power (e.g., voting rights). Empowering franchisees sends a strong signal that their participation is taken seriously. Proper documentation leads to greater transparency. Participants need up-to-date information on how the project is proceeding. Access to all relevant and current information (e.g., via the firm's intranet) is critical to ensure high levels of transparency. In addition to monetary incentives, non-monetary rewards serve as a compensation for project contribution. For example, measures in this area might include communications about successful innovation initiatives based on franchisee engagement.

5.3. Contribution to the literature

Comparing the set of six design factors emerging from this study with existing approaches, a notable finding is that adjacent literature streams of creativity and open innovation research similarly discuss some of the six participation quality dimensions. In particular, creativity research acknowledges the relevance of task-related resources and rewards for creative work environments (Amabile et al., 1996). Similarly, the co-creation/open innovation literature

emphasizes the importance of rewarding stakeholder contributions (Adamczyk et al., 2012). The remaining four design factors tested in this study receive less empirical attention. With regard to perceived influence, Janssen (2005) identifies a direct positive effect of employee's perceived influence on innovative behavior. Research about open source software projects emphasizes availability of supporting tools as an important design element (Lakhani & Panetta, 2007). Im and Nakata (2008) show that cross-functional integration benefits from planning process formalization, supporting this study's finding of a positive contribution of process transparency to participation quality. Finally, the two literature streams do not investigate involvement timing. Referring to the study's first aim of examining factors defining well-designed innovation projects, this article provides a synthesis of well-established and rarely explored design mechanisms are important characteristics of good participatory innovation processes.

The study's second aim is to clarify the relationships between the participatory characteristics of innovation projects. Regarding this objective, the study utilizes Amabile and Kramer's (2011) progress principle to better understand relationships among the identified design characteristics of innovation projects. Other than a small number of notable exceptions (e.g., Burroughs et al., 2011; Janssen, 2005), prior research in innovation management focuses on direct effects, disregarding potential interactions. Testing the relationship among the proposed factors, the study results demonstrate that the design characteristics must be examined as a group in order to understand when an innovation will more likely be successful.

5.4 Limitations and further research

The study findings and related limitations offer opportunities for further research. First, in addition to the three outcomes of well-designed innovation projects investigated in

this study, value exists in investigating whether or not these projects have additional positive effects. Franchisees who participate in innovation projects may feel more valued as a result of their contributions, communicate to other franchisees about the project, and show higher commitment and work motivation levels.

Second, this study focuses on franchisees as a stakeholder group. A suggestion for future research is to replicate this study with the stakeholder groups of employees and customers. In particular, task-related resources, degree of influence, and incentive mechanisms may impact all stakeholders, whereas voluntariness of participation, transparency of processes, and early involvement may be of special relevance for franchisees due to their perception of themselves as independent entrepreneurs.

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FIGURE 1
Conceptual Model and Hypotheses

TABLE 1
Identified Combinations (Paths) of Participation Quality Dimensions Using fsQCA

Analyzed Outcome	Path	Causal conditions						Coverage			Solution	
		RES	EAR	INF	TRA	INC	VOL	Raw	Unique	Consistency	Coverage	Consistency
Innovation success	1	●	●	●	●	●	●	.47	.37	.88	.67	.91
	2	○	○	○	○	●	○	.30	.20	1.00		
Acceptance of innovation	1	●	●	●	●	●	●	.59	.23	1.00	.75	1.00
	3	●	○	●	○	●	○	.30	.04	1.00		
	4	○	●	●	○	○	●	.29	.07	.99		
	5	●	●	●	●	○	○	.33	.00	1.00		
Intrinsic motivation	1	●	●	●	●	●	●	.45	.15	.94	.58	.94
	3	●	○	●	○	●	○	.24	.03	1.00		
	4	○	●	●	○	○	●	.24	.06	.99		
	5	●	●	●	●	○	○	.27	.00	1.00		

Notes: Black circles “●” indicate the presence of causal conditions. White circles “○” indicate the absence or negation of causal conditions.

Acronyms are as follows: RES (Task-related resources), EAR (Early involvement), INF (Degree of influence), TRA (Transparency of processes), INC (Incentive mechanisms), VOL (Voluntariness).

TABLE 2
Testing Mean-Differences across Identified Combinations (Paths) of Participation Quality

						95% C.I.	
Path (I)	Path (J)	M (I)	M (J)	MD (I-J)	p	lower bound	upper bound
Innovation success							
Other systems	Systems on path 1 (res*ear*inf*tra*inc*vol)	3.3	4.0	-.69	.01	-.84	-.54
	Systems on path 2 (~res*~ear*~inf*~tra*inc*~vol)	3.3	3.4	-.10	.19	-.25	.05
Acceptance of innovation							
Other systems	Systems on path 1 (res*ear*inf*tra*inc*vol)	3.5	4.1	-.63	.01	-.76	-.50
	Systems on path 3 (res*~ear*inf*~tra*inc*~vol)	3.5	4.0	-.49	.01	-.62	-.37
	Systems on path 4 (~res*ear*inf*~tra*~inc*vol)	3.5	3.7	-.18	.01	-.30	-.05
	Systems on path 5 (res*ear*inf*tra*~inc*~vol)	3.5	4.4	-.87	.01	-.99	-.74
Intrinsic motivation							
Other systems	Systems on path 1 (res*ear*inf*tra*inc*vol)	3.9	4.2	-.38	.00	-.53	-.20
	Systems on path 3 (res*~ear*inf*~tra*inc*~vol)	3.9	4.2	-.33	.01	-.47	-.18
	Systems on path 4 (~res*ear*inf*~tra*~inc*vol)	3.9	3.8	.08	.27	-.06	.23
	Systems on path 5 (res*ear*inf*tra*~inc*~vol)	3.9	4.4	-.54	.00	-.68	-.39

APPENDIX

Measurement of Participation Quality

Construct	Factor Loading	Composite Reliability	Average Variance Extracted
Task-Related Resources		.90	.65
In innovation projects,			
... the participants are capable and intelligent.	.64		
... adequate and useful equipment is available.	.87		
... adequate financial resources are available.	.78		
... sufficient information is provided.	.83		
... adequate resources are available.	.88		
Early Involvement		.95	.83
In innovation projects,			
... the procedures can be characterized as interactive.	.71		
... parties engaged/participants are involved in time.	.94		
... participation takes place early enough.	.97		
... participants are generally involved in time.	.99		
Degree of Influence		.94	.79
In innovation projects,			
... the development of innovative concepts can be influenced effectively.	.84		
... participation has an influence on the outcomes achieved.	.89		
... there is a positive impact on the general approach to handling challenges.	.87		
... participants have strong influence during the project.	.96		
Transparency of Processes		.91	.76
In innovation projects,			
... adequate and comprehensive protocols are provided.	.75		
... protocols are available for all parties interested.	.92		
... information is available in an adequate format.	.93		
Incentive Mechanisms		.82	.61
In innovation projects,			
... participants are incentivized by public mention.	.99		
... participants are incentivized by obtaining higher degrees of freedom.	.63		
... participation is incentivized strongly.	.66		
Voluntariness		.84	.64
In innovation projects,			
... participants do not feel forced to participate.	.86		
... participation can be described as “not because you have to, but because you want to”.	.84		
... participation is completely voluntary in nature.	.69		

Global fit indices: CFI = 0.95, TLI = 0.95, RMSEA = 0.07, SRMR = 0.09.

All items were measured on 5-point-likert-type scales ranging from 1=strongly disagree to 5=strongly agree.